

ABSTRACT OF THE DISCLOSURE

In a semiconductor device having a semiconductor film crystallized by using a metal element, it is an object to provide a technique for reducing the crystal defects in a semiconductor film, and a technique for forming a semiconductor film with high 5 crystallinity by effectively removing impurity metal elements.

An amorphous semiconductor film is formed over a transparent substrate; the amorphous semiconductor film is crystallized by using metal elements; a crystalline semiconductor film is irradiated with a first laser beam in a direction from the semiconductor film to the substrate, thereby partly melted and crystallized; and the 10 semiconductor film is irradiated with a second laser beam through the substrate in a direction from the substrate film to the semiconductor film.